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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* MARVIN L. GREEN,  
SWAMINATHAN RAMESH, and  
WALTER H. OHRBOM

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Appeal 2008-3412  
Application 10/732,850  
Technology Center 1700

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Decided: July 18, 2008

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Before EDWARD C. KIMLIN, THOMAS A. WALTZ, and  
PETER F. KRATZ, *Administrative Patent Judges*.

KRATZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal from the Examiner's final rejection of claims 1-15. We have jurisdiction pursuant to 35 U.S.C. § 6.

Appellants' asserted invention is directed to a sag-resistant, non-polymeric coating composition including at least one monomeric material with active hydrogen groups, a cross-linker, and a crystalline reaction product of an amine and an isocyanate and a method of preparing same. Claims 1 and 13 are illustrative and reproduced below:

1. A thermosetting, non-polymeric coating composition comprising at least one monomeric material having a plurality of active hydrogen groups,

at least one crosslinker reactive with the at least one monomeric material, and

a crystalline reaction product of an amine and an isocyanate.

13. A method of coating a substrate with a coating composition, having steps of:

applying to the substrate a layer of thermosetting, non-polymeric coating composition comprising at least one monomeric material having a plurality of active hydrogen groups, at least one crosslinker reactive with the at least one monomeric material, and a crystalline reaction product of a primary monoamine and an isocyanate; and

curing the applied layer to produce a cured coating layer on the substrate.

The Examiner relies on the following prior art references as evidence in rejecting the appealed claims:

Ohrbom	5,756,213	May 26, 1998
Green	5,872,195	Feb. 16, 1999
Boisseau	2002/0155278 A1	Oct. 24, 2002

Claims 1-3 and 7-15 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Boisseau. Claims 1-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Boisseau in view of Green and Ohrbom.

We affirm both rejections. Our reasoning follows.

For the rejection under 35 U.S.C. § 102(b), we note that in order “[t]o anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently.” *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997); *accord Glaxo, Inc. v. Novopharm, Ltd.*, 52 F.3d 1043, 1047 (Fed. Cir. 1995). However, anticipation by a prior art reference does not require that the reference recognize either the inventive concept of the claimed subject matter or the inherent properties that may be possessed by the prior art reference. *See Verdegaa Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 633 (Fed. Cir.), *cert. denied*, 484 U.S. 827 (1987).

Appellants argue the claims together as a group with respect to the anticipation rejection. Thus, we select claim 1 as the representative claim on which we decide this appeal as to the § 102(b) rejection.

Appellants do not argue that Boisseau fails to disclose a coating composition including a material with active hydrogen, a cross-linker, and a crystalline reaction product of an amine and an isocyanate. Rather, Appellants contend that Boisseau’s active hydrogen containing material is not a material corresponding to Appellants’ active-hydrogen-containing monomeric material. Representative claim 1 requires that the composition includes at least one such monomeric material (Br. 3-4 and Reply Br. 2-5).

On the other hand, the Examiner has determined that the representative claim 1 requirement for a non-polymeric coating composition that includes, *inter alia*, a monomeric material, reads on a coating

composition described by Boisseau. According to the Examiner, the representative claim 1 requirement for at least one monomeric material as being part of the coating composition reads on the active-hydrogen group-containing component of the coating composition of Boisseau. In this regard, the Examiner has determined that the contested claim terms “at least one monomeric material” and “non-polymeric” are broad terms that not only do not exclude the presence of polymers and/or oligomers in the claimed composition but also are open to using a multiple monomer unit-containing material as the at least one monomeric material. Thus, the Examiner has determined that Boisseau discloses film forming components, such as oligomers, that fall within the scope of the representative claim 1 requirement for at least one monomeric material (Ans. 4-5).

During prosecution of a patent application, the claims therein are given the broadest reasonable interpretation consistent with the Specification as it would be understood by one of ordinary skill in the art. *Gechter v. Davidson*, 116 F.3d 1454, 1457, 1460 n.3 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321-22 (Fed. Cir. 1989). As pointed out by the court in *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997):

Absent an express definition in their specification, the fact that appellants can point to definitions or usages that conform to their interpretation does not make the PTO’s definition unreasonable when the PTO can point to other sources that support their interpretation.

Here, the claim terms “non-polymeric” as used in the representative claim 1 preamble and “at least one monomeric material...” are not defined in the subject Specification. We note that the claimed composition can include both polymeric and non-polymeric constituents as evidenced by the

use of the transitional term “comprising” in representative claim 1. This interpretation is consistent with the Specification Examples in that Appellants present Examples of their allegedly inventive non-polymeric composition that includes carbamate-functional acrylic polymer as part of a fumed silica dispersion additive with or without carbamate-functional resin (Specification, Examples 4-6).

As for the required at least one monomeric material, Appellants refer to an extrinsic reference source (Br. 3-4). The excerpts cited from *Encyclopedia of Polymer Science and Engineering* (2d Ed.), Vol. 10, pp. 25 and 432 (1988), basically define a monomer as being a compound that can be converted into an oligomer, which oligomer, itself, comprises a few constitutional units made of monomer molecules. A monomer is further defined as a compound which is capable of furnishing one or more constitutional parts of a polymer or oligomer. However, this definition of monomer is not subscribed to by Appellants in their Specification. Moreover, representative claim 1 does not employ the argued term “monomer” but rather the claim term “at least one monomeric material.”

Additionally, the Specification examples and described specific embodiments of materials do not indicate that a strict definition is being employed for the representative claim 1 term “monomeric material.” There is nothing we can find in the Specification that strictly limits the claimed composition by requiring that the monomeric material constituent must include at least one compound or molecule of low molecular weight and simple structure as part of the claimed composition. Nor have Appellants pointed out where the Specification specifically excludes more complex compounds (oligomers, incompletely polymerized polymers, and/or non-

cross-linked polymers) from the claimed composition by the at least one monomeric material language, including exclusion of the oligomers described by Boisseau. In this regard, Appellant has not established that Boisseau's oligomers are not capable of further polymerization reaction and capable of forming a constitutional part of a cured polymer. Indeed, as evidenced by Boisseau's disclosure of subsequent curing (Boisseau, ¶¶ 0019, 0022, 0048, 0050, 0054, 0056, 0096, 0099), the oligomers of Boisseau reasonably appear to be capable of undergoing further reaction to form a constitutional part of a polymer.

Appellants seemingly argue that their exemplified monomeric materials, which can include an addition product, (Reply Br. 2-5; Specification ¶¶ 0013-0027), do not include more complex oligomeric materials or poly addition products. However, Appellants make it abundantly clear at page 4 of the Specification that the articles "a" or "an" as employed by Appellants are to be interpreted to include one or more than one. Thus, the addition reactions described in the Specification do not specifically exclude poly additions and the products formed therefrom (oligomeric materials) as being within the scope of the claimed "at least one monomeric material;" that is, a material capable of forming a constituent part of a subsequently cured polymer.

Appellants' Specification lends additional support for a broadest reasonable claim construction that is not at all limited by any examples and embodiments described in the Specification as Appellants seemingly argue. This is because Appellants state upfront that "[t]he following description of the preferred embodiment(s) is merely exemplary in nature and is in no way intended to limit the invention, its application, or uses" (Specification ¶

0011). Thus, the Specification makes plain that the claims before us are not limited to the preferred and exemplified embodiments. Furthermore, it is well settled that in interpreting claim terms it is inappropriate to read in further limitations from the Specification. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

On this record, we agree with the Examiner that Boisseau describes a composition that is within the scope of representative claim 1. Consequently, we affirm the Examiner's anticipation rejection of claims 1-3 and 7-15, on this record.

Concerning the rejection under 35 U.S.C. § 103, the factual inquiry into obviousness requires a determination of: (1) the scope and content of the prior art; (2) the differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) any secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). "[A]nalysis [of whether the subject matter of a claim is obvious] need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007).

Claims 1-4 and 7-15 are argued as a group. We select claim 1 as the representative claim for this claim grouping. We shall consider claims 5 and 6 separately to the extent that they are separately argued.

We note that a disclosure that anticipates under 35 U.S.C. § 102 also renders the claim unpatentable under 35 U.S.C. § 103, for "anticipation is the epitome of obviousness." *Jones v. Hardy*, 727 F.2d 1524, 1529 (Fed. Cir. 1984). Also, see *In re Fracalossi*, 681 F.2d 792, 794 (CCPA 1982); *In*



*re Pearson*, 494 F.2d 1399, 1402 (CCPA 1974). Consequently, claims 1-3 and 7-15 are found to be prima facie obvious based on our anticipation determination as to these claims.

In addition to disclosing a coating composition that can include oligomers and/or polymers as the active hydrogen containing film forming component, Boisseau discloses or suggests that the film forming component of the coating composition can include carbonate functional (active-hydrogen) compounds from a variety of sources (¶¶ 0048, 0096-0098) and that these compounds can be of low molecular weight. In this regard, the Examiner has further found that Green discloses that monomeric carbamate compounds are known to be useful as part of a similar thermosetting curable coating composition (Ans., 4; Green; col. 2, ll. 5-10 and col. 5, ll. 37-43). As evidenced by Appellants' dependent claims 2 and 4 for example, compounds containing at least one carbamate group fall within the scope of the hydrogen active compounds required by Appellants' claimed invention. Also, the Examiner has found that Ohrbom further suggests the use of film forming compounds within the scope of claims 5 and 6 in a similar coating (Ans. 4). Moreover, as evidenced by component (c) of Green (col. 5, l. 28-col. 8, l.40 and col. 10, ll. 25-30), the inclusion of such known monomer hydrogen active compounds in a film forming component of a similar coating composition is a known alternative for obtaining desirable coatings.

Thus, even if representative claim 1 were considered to require at least one non-oligomeric and non-polymeric hydrogen active monomer compound as part of the called for monomeric material, one of ordinary skill in the art would have found a suggestion in the disclosure of Boisseau alone or in combination with Green and Ohrbom that would have reasonably led to

the use of at least one such known hydrogen active monomer as part of the film forming component of Boisseau's composition.

As for separately argued claims 5 and 6, we select claim 5 as the representative claim. Ohrbom discloses forming hydrogen active carbamate group-containing compounds using lactones or an hydroxyl carboxylic acid and carbonate functional compounds as reactants (col. 4, ll. 1-14), which reaction products are useful as film formers in a similar coating composition to that of Boisseau. As such, Appellants separate arguments for dependent claims 5 and 6 do not serve to identify reversible error in the Examiner's obviousness rejection based on the combined teachings of the references.

#### CONCLUSION

The decision of the Examiner to reject claims 1-3 and 7-15 under 35 U.S.C. § 102(b) as being anticipated by Boisseau and to reject claims 1-15 under 35 U.S.C. § 103(a) as being unpatentable over Boisseau in view of Green and Ohrbom is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

#### AFFIRMED

tf/ljs

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